

**This listing of claims will replace all prior versions, and listings, of claims in the application:**

**Listing of claims:**

1. (previously presented) A computer-implemented method for generating hedging orders, the method comprising:  
calculating a volatility factor associated with a first financial instrument;  
generating a first stage of a multiple stage hedge sequence, wherein said first stage in the hedge sequence comprises:  
a first order to hedge the first financial instrument by acquiring a first position in a second financial instrument at a first target price that is determined based on the volatility factor and a reference price; and  
a second order to hedge the first financial instrument by acquiring an opposite position to said first position in the second financial instrument at a second target price that is determined based on said volatility factor and said reference price; and  
transmitting the first and second orders to an exchange, such that both the first and the second orders are simultaneously pending and execution of the first or second orders is determined based on price movement of the second financial instrument.
2. (previously presented) The method of claim 1 wherein acquiring a position in the second financial instrument comprises acquiring a position selected from the group consisting of a short position and a long position in the second financial instrument.
3. (canceled)
4. (previously presented) The method of claim 1 wherein:  
the first order comprises a buy order at a target price less than the current asking price.

5. (previously presented) The method of claim 4 wherein said second order to hedge comprises a sell order to sell the second financial instrument at a target price greater than the current bid price for the second financial instrument.
6. (previously presented) The method of claim 1 wherein the first financial instrument comprises an option on an underlying stock and the second financial instrument comprises the underlying stock of the first financial instrument.
7. (canceled)
8. (previously presented) The method of claim 1 wherein the volatility factor is selected from the group consisting of:
  - a *percMove*( $\sigma$ ) factor, wherein said *percMove*( $\sigma$ ) factor represents the daily volatility of the second financial instrument; and
  - a *percMove* factor, wherein said *percMove* factor represents a trader specified value.
9. (canceled)
10. (canceled)
11. (canceled)
12. (canceled)

13. (previously added) The method of claim 8, wherein the first order to hedge the first financial instrument by acquiring a first position in a second financial instrument comprises a buy order with a target price, and wherein the target price of said buy order is calculated according to the following formula:

$$\text{Buy Price} = \text{Reference Price} * (100 - \text{percMove}(\sigma)) / 100.$$

14. (previously added) The method of claim 8, wherein the first order to hedge the first financial instrument by acquiring a first position in a second financial instrument comprises a sell order with a target price, and wherein the target price of said sell order is calculated according to the following formula:

$$\text{Sell Price} = \text{Reference Price} * (100 + \text{percMove}(\sigma)) / 100.$$

15. (previously added) The method of claim 13, further comprising a buy quantity, wherein said buy quantity is calculated according to the following formula:

$$\text{Buy Qty} := (\text{percMove}(\sigma) * \Gamma) / \text{Buy Price},$$

wherein  $\Gamma = \frac{\partial \Delta}{\partial S} = \frac{\partial C^2}{\partial^2 S}$ , wherein  $C$  is the first financial instrument price,  $S$  is the second

financial instrument price and  $\Delta = \frac{\partial C}{\partial S}$ .

16. (previously added) The method of claim 14, further comprising a sell quantity, wherein said sell quantity is calculated according to the following formula:

$$\text{Sell Qty} := (\text{percMove}(\sigma) * \Gamma) / \text{Sell Price},$$

wherein  $\Gamma = \frac{\partial \Delta}{\partial S} = \frac{\partial C^2}{\partial^2 S}$ , wherein  $C$  is the first financial instrument price,  $S$  is the second

financial instrument price and  $\Delta = \frac{\partial C}{\partial S}$ .

17. (previously added) The method of claim 15, wherein said opposite position to said first position in the second financial instrument comprises a sell order with a target price and a sell quantity, wherein said target price of said sell order is calculated according to the following formula:

$$\text{Sell Price} = \text{Reference Price} * (100 + \text{percMove}(\sigma)) / 100;$$

and wherein said sell order quantity is calculated according the following formula:

$$\text{Sell Qty} := (\text{percMove}(\sigma) * \Gamma) / \text{Sell Price}.$$

18. (previously added) The method of claim 16, wherein said opposite position to said first position in the second financial instrument comprises a buy order with a target price and a buy quantity, wherein said target price of said buy order is calculated according to the following formula:

$$\text{Buy Price} = \text{Reference Price} * (100 - \text{percMove}(\sigma)) / 100$$

and wherein said buy order quantity is calculated according the following formula:

$$\text{Buy Qty} := (\text{percMove}(\sigma) * \Gamma) / \text{Buy Price}.$$

19. (previously added) A computer-implemented method for generating a sequence of hedging orders to hedge the pricing volatility of a first financial instrument, comprising an option associated with an underlying second financial instrument, the method comprising:

determining a first buy price, a first buy quantity, a first sell price, and a first sell quantity, wherein the first buy price and the first sell price are based on an initial reference price and a volatility factor indicative of the percentage movement in the price of the second financial instrument at which a trader desires to hedge, and wherein the first buy quantity is based on a gamma factor, the volatility factor and the buy price; and the first sell quantity is based on the gamma factor, the volatility factor and the sell price;

generating a first stage of a hedging sequence for hedging the first financial instrument, the first stage comprising:

a first buy order to purchase the second financial instrument specifying a buy quantity based on the first buy quantity, and a buy price based on the first buy price; and

a first sell order to sell the second financial instrument specifying a sell quantity based on the first sell quantity, and a sell price based on the first sell price; and

transmitting the first buy order and the first sell order to the exchange such that execution of the first buy order or the first sell order is determined based on price movement of the second financial instrument.

20. (new) A computer-implemented system for generating hedging orders, the system comprising:

a programmable processor adapted to:

calculating a volatility factor associated with a first financial instrument;

generating a first stage of a multiple stage hedge sequence, wherein said first stage in the hedge sequence comprises:

a first order to hedge the first financial instrument by acquiring a first position in a second financial instrument at a first target price that is determined based on the volatility factor and a reference price; and

a second order to hedge the first financial instrument by acquiring an opposite position to said first position in the second financial instrument at a second target price that is determined based on said volatility factor and said reference price; and transmitting the first and second orders to an exchange, such that both the first and the second orders are simultaneously pending and execution of the first or second orders is determined based on price movement of the second financial instrument.

21. (new) The system of claim 20 wherein acquiring a position in the second financial instrument comprises acquiring a position selected from the group consisting of a short position and a long position in the second financial instrument.

22. (new) The system of claim 20 wherein:  
the first order comprises a buy order at a target price less than the current asking price.

23. (new) The system of claim 22 wherein said second order to hedge comprises a sell order to sell the second financial instrument at a target price greater than the current bid price for the second financial instrument.

24. (new) The system of claim 20 wherein the first financial instrument comprises an option on an underlying stock and the second financial instrument comprises the underlying stock of the first financial instrument.

25. (new) The system of claim 20 wherein the volatility factor is selected from the group consisting of:

a *percMove*( $\sigma$ ) factor, wherein said *percMove*( $\sigma$ ) factor represents the daily volatility of the second financial instrument; and

a *percMove* factor, wherein said *percMove* factor represents a trader specified value.

26. (new) The system of claim 25, wherein the first order to hedge the first financial instrument by acquiring a first position in a second financial instrument comprises a buy order with a target price, and wherein the target price of said buy order is calculated according to the following formula:

$$\text{Buy Price} = \text{Reference Price} * (100 - \text{percMove}(\sigma)) / 100.$$

27. (new) The system of claim 25, wherein the first order to hedge the first financial instrument by acquiring a first position in a second financial instrument comprises a sell order with a target price, and wherein the target price of said sell order is calculated according to the following formula:

$$\text{Sell Price} = \text{Reference Price} * (100 + \text{percMove}(\sigma)) / 100.$$

28. (new) The system of claim 26, further comprising a buy quantity, wherein said buy quantity is calculated according to the following formula:

$$\text{Buy Qty} := (\text{percMove}(\sigma) * \Gamma) / \text{Buy Price},$$

wherein  $\Gamma = \frac{\partial \Delta}{\partial S} = \frac{\partial C^2}{\partial^2 S}$ , wherein  $C$  is the first financial instrument price,  $S$  is the second

financial instrument price and  $\Delta = \frac{\partial C}{\partial S}$ .

29. (new) The system of claim 27, further comprising a sell quantity, wherein said sell quantity is calculated according to the following formula:

$$\text{Sell Qty} := (\text{percMove}(\sigma) * \Gamma) / \text{Sell Price},$$

wherein  $\Gamma = \frac{\partial \Delta}{\partial S} = \frac{\partial C^2}{\partial^2 S}$ , wherein  $C$  is the first financial instrument price,  $S$  is the second

financial instrument price and  $\Delta = \frac{\partial C}{\partial S}$ .

30. (new) The system of claim 28, wherein said opposite position to said first position in the second financial instrument comprises a sell order with a target price and a sell quantity, wherein said target price of said sell order is calculated according to the following formula:

$$\text{Sell Price} = \text{Reference Price} * (100 + \text{percMove}(\sigma)) / 100;$$

and wherein said sell order quantity is calculated according the following formula:

$$\text{Sell Qty} := (\text{percMove}(\sigma) * \Gamma) / \text{Sell Price}.$$

31. (new) The system of claim 29, wherein said opposite position to said first position in the second financial instrument comprises a buy order with a target price and a buy quantity, wherein said target price of said buy order is calculated according to the following formula:

$$\text{Buy Price} = \text{Reference Price} * (100 - \text{percMove}(\sigma)) / 100$$

and wherein said buy order quantity is calculated according the following formula:

$$\text{Buy Qty} := (\text{percMove}(\sigma) * \Gamma) / \text{Buy Price}.$$

32. (new) A computer-implemented system for generating a sequence of hedging orders to hedge the pricing volatility of a first financial instrument, comprising an option associated with an underlying second financial instrument, the system comprising:

a programmable processor adapted to:



determining a first buy price, a first buy quantity, a first sell price, and a first sell quantity, wherein the first buy price and the first sell price are based on an initial reference price and a volatility factor indicative of the percentage movement in the price of the second financial instrument at which a trader desires to hedge, and wherein the first buy quantity is based on a gamma factor, the volatility factor and the buy price; and the first sell quantity is based on the gamma factor, the volatility factor and the sell price;

generating a first stage of a hedging sequence for hedging the first financial instrument, the first stage comprising:

a first buy order to purchase the second financial instrument specifying a buy quantity based on the first buy quantity, and a buy price based on the first buy price; and

a first sell order to sell the second financial instrument specifying a sell quantity based on the first sell quantity, and a sell price based on the first sell price; and

transmitting the first buy order and the first sell order to the exchange such that execution of the first buy order or the first sell order is determined based on price movement of the second financial instrument.